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PCT/NL00/00539

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

VAN DEN HEUVEL, Henricus, Theodorus
Patentwerk BV
Postbus 1514
NL-5200 BN 's-Hertogenbosch
PAYS-BAS

Date of mailing (day/month/year) 31 January 2002 (31.01.02)	
Applicant's or agent's file reference 0021086 WO	**IMPORTANT NOTIFICATION**
International application No. PCT/NL00/00539	**International filing date** (day/month/year) 28 July 2000 (28.07.00)

1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

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2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

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3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office
☐ the International Searching Authority
☐ the International Preliminary Examining Authority
☐ the designated Offices concerned
☒ the elected Offices concerned
☐ other:

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer Elisabeth KÖNIG
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Form PCT/IB/306 (March 1994)

004634259

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
0021086 WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/NL 00/ 00539	28/07/2000	28/07/1999
Applicant		
HIJL, Benno, Henricus, Nicolaas		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

   [ ] contained in the international application in written form.

   [ ] filed together with the international application in computer readable form.

   [ ] furnished subsequently to this Authority in written form.

   [ ] furnished subsequently to this Authority in computer readble form.

   [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 5

   [X] as suggested by the applicant.

   [ ] because the applicant failed to suggest a figure.

   [ ] because this figure better characterizes the invention.

   [ ] None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL 00/00539

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06 H04L29/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, INSPEC, WPI Data, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	ZATTI S: "NAMING IN OSI: DISTINGUISHED NAMES OR OBJECT INDENTIFIERS?" PROCEEDINGS OF THE ANNUAL EUROPEAN COMPUTER CONFERENCE. (COMPEURO),US,LOS ALAMITOS, IEEE. COMP. SOC. PRESS, vol. CONF. 5, 1991, pages 258-262, XP000252701 cited in the application page 258, left-hand column, line 50 -page 259, right-hand column, line 12	1,7
A		2-6

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[X] Further documents are listed in the continuation of box C.

[ ] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
28 November 2000	05/12/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Mikkelsen, C

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Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PC[redacted] 00/00539

C.(Continuation) DOCUMENTS CONSIDERE[redacted]BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
Y	WEIHRICH T: "FILOFAX FUERS INTERNET" CT MAGAZIN FUER COMPUTER TECHNIK,DE,VERLAG HEINZ HEISE GMBH., HANNOVER, no. 10, 1 October 1997 (1997-10-01), pages 346-348,350-35, XP000701086 ISSN: 0724-8679 cited in the application page 347	1,7
A	-----	2-6

1

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT PERATION TREATY (PCT)

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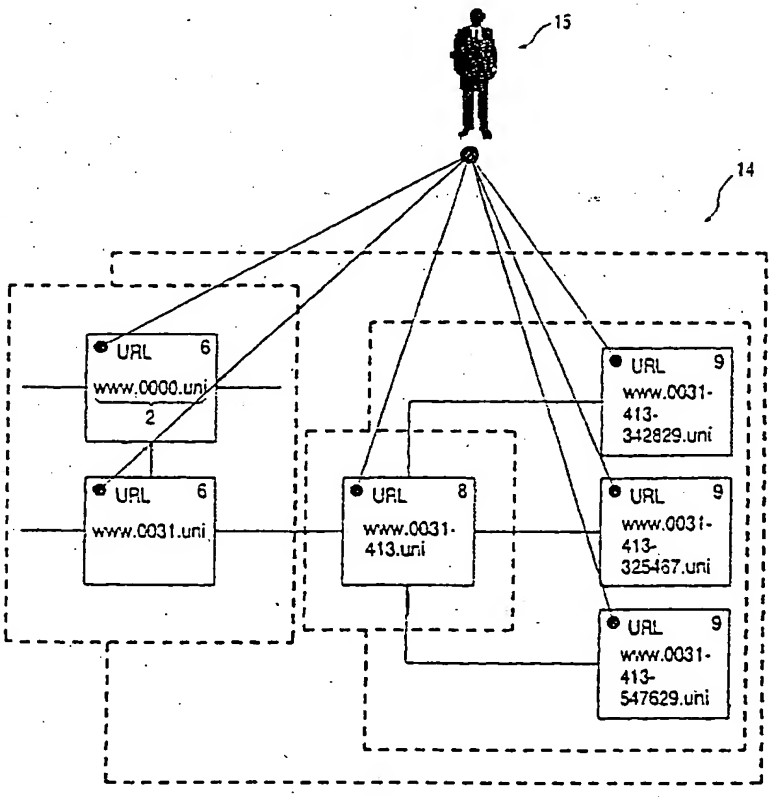
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD OF IDENTIFYING AND REGISTERING ENTITIES AND AN ASSEMBLY OF HARDWARE AND SOFTWARE FOR APPLYING SUCH A METHOD



(57) Abstract: The invention relates to a method of identifying and registering entities, in particular for internet applications, comprising the processing steps of: a) defining a URL/domain name system in accordance with a system of identification codes, b) formulating URL/domain name notation rules in accordance with the defined system of identification codes, and c) designating codes and the associated URLs/domain names on the basis of the defined system of identification codes and in accordance with the formulated URL/domain name notation rules. The invention also relates to an assembly of hardware and software for applying this method.

WO 01/08375 A1

Published:

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— *Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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Method of identifying and registering entities and an assembly of hardware and software for applying such a method

The invention relates to a method of identifying and registering entities, in particular for internet applications, and to an assembly of hardware and software for applying such a method.

The internet is a fast-growing medium which, from a communication viewpoint, consists of Top Level Domains (TLDs), internet addresses (Uniform Resource Locators (URLs)), internet sites with information, search engines, users and access providers. Top Level Domains such as "com", "net", "org", "edu", "gov", "mil" etc. are defined on the basis of a worldwide open organization structure. The structure of naming is based on internationally standardized character sets. There are also Sub-Level Domains (SLDs) which are country-specific: "us", "uk", "nl" etc. The general search engines available are focussed particularly on searching sites by content. The worldwide character and the infinite possibilities in respect of the publication of information and message traffic make it essentially a medium with particularly attractive use potential. It is thought that internet at this moment is at its initial stage. Characteristic of the present situation is that heretofore internet has been designed mainly by engineers and that at the moment the providers and users are located for the most part in industrialized countries. It is expected that the number of users and providers will only increase in the future. Through wider application the internet will also undergo further changes so as to make it more of a user medium with unrivalled possibilities and with a broad, worldwide degree of participation.

Seen from a worldwide viewpoint, there is at the moment quite a low internet participation and a mediocre spread of providers and users. The main causes for this lack of spread, in addition of course to the relatively short existence of internet, are to be found in aspects such as technical possibilities, cost, the anticipated utilization, retrievability, position in respect of for instance competitors and so on. The internet has an essentially worldwide orientation. Powerful options aimed specially at (inter)local and (inter)regional oriented use (other than on SLDs) are lacking. In the present situation on the internet, searching for a URL/domain name is practically only possible via the internet. Within the internet unclear or confusing naming is possible for

URLs/domain names, for instance due to more or less unobstructed use of names of general importance and/or significance. It is generally difficult to be directly retrievable as provider on internet on the basis of URL/domain name. Particularly in the case of frequently occurring names it is in fact impossible to register for each applicant a suitable, distinctive and retrievable URL/domain name. The first registration of a URL/domain name by a user/provider can thus result in a great advantage. An additional drawback of a first registration is that third parties often register URLs/domain names on a large scale having as content the name of for instance a well-known personality or company, whereby the obvious URL/domain name in question is taken, and alleged improper use of a name is thereby made in respect of the alleged entitled person. With the current practice surrounding naming of URLs/domains there is a language and character problem. That is, the problem that in written form each language or group of languages employs its own set of letters and characters. Search engines therefore have the limitation in respect of the following: as search result for a search term in a particular language all that is generally obtained is the information found which is available in the same language. National languages hereby acquire a significant influence in all information queries, this while language could be an insignificant aspect of countless queries or need not represent a barrier. The use of URLs/domain names is often difficult because the URLs/domain names are often too long and complicated. The URL notation moreover contains little functional logic. Search engines often have a worldwide orientation in terms of technical possibilities but, due to the manner of searching by information content in a site and the language barrier which thereby becomes manifest, they are often language-dependent in use and not very regionally oriented. In many of the present search engines on the internet there is an inadequately defined relation between query and result. The present search engines for general purposes search by content in a site on the basis of search terms entered by the user. Searching usually proceeds with difficulty and the search results are in many cases mediocre or poor. Through the manner of searching (for details concerning content), the present information provision and the growth of internet (applications) which can be expected in the future, results of queries based on search terms which are not very specific will to an increasing extent produce unusable results. The use of search engines is generally not intuitive. Specific reduction of the search field in a usual,

intuitive manner (this may be essential for determined queries) prior to a detailed query is scarcely possible with the existing search engines suitable for general use. At the moment TLDs are defined on the basis of a worldwide, open organizational structure with few restrictions in URLs/domain names and they therefore provide few specific options for use.

The publication by S. Zatti: "Naming in OSI: "Distinguished Names or Object Identifiers?", Proceedings of the Annual European Computer Conference (Compeuro), US, Los Alamitos, IEEE, Computer Society Press, part-conference 5, 1991, pages 258-262" describes two identification schemes, i.e. Distinguished Names (DN) and Object Identifiers (OI), which are used on a large scale in an OSI environment. The DN scheme is sufficiently flexible and powerful to provide the worldwide need for names. The OI scheme has the possibility of incorporating special criteria imposed by individual requirements. The problem of these schemes is that in the present form they cannot be integrated into each other, thus creating a need to design a system which, within the possibilities of OSI and worldwide networks, provides a uniform naming scheme to identify all types of objects. The publication proposes a uniform solution, wherein both schemes can exist side by side in one environment, solely through a minimal modification in said schemes.

The present invention has for its object to provide an improved device for registering, addressing, structuring and finding entities and data, particularly for internet applications, while retaining the advantages of the prior art but without the limitations of the prior art.

The present invention provides for this purpose a method for identifying and registering entities, in particular for internet applications, comprising the characteristics of: a) defining a URL/domain name system in accordance with a system of identification codes, b) formulating URL/domain name notation rules in accordance with the defined system of identification codes, and c) designating codes and the associated URLs/domain names on the basis of the defined system of identification codes and in accordance with the formulated URL/domain name notation rules.

The method preferably also comprises the processing steps of: d) registering data of entities, e) creating a data carrier on the basis of the registered data, and f) linking the data carrier to a specific URL/domain name. By replacing names and/or words in a URL/domain name by an identification code associated with a user/provider and registering this in accordance with notation rules suitable for the code there results a better retrievability through a logical and/or known relation between provider or that which is provided and the registered URL/domain name. In addition, this provides the option of finding URLs and information on the internet, at least when the specific URLs/domain names, according to preferred embodiments, are made accessible to the public and/or when services are provided by means of a data carrier, such as for instance the specific URLs/domain names or a page with hyperlinks, by making use of other non-internet-related (search) systems and media which are based on the same system of identifications. When an existing identification code is used, potential registrants can be approached in purposeful manner, wherein use can be made of a possibly already existing search system. Depending on the identification code used, the participation among general or specific groups can hereby be increased. The use of identification codes in a URL/domain name creates a term-free/value-free URL/domain name without any significance in itself. Language problems can be obviated by the use of identification codes and associated structure, even when this involves the permitted characters, which are obviated to a considerable extent in URL naming. The verbal transfer can become easier and more unambiguous due to specific and functionally limiting notation rules. Through the use of identification codes and notation rules the structure of the internet, and therewith the logic, is increased. Making use of the notation rules and the structure ensuing therefrom enables refinement of the search field (at URL level), also without use having to be made of a search engine for this purpose. As the internet grows (users/providers) the functionality can also be increased and transparency can remain ensured. Owing to the combination used according to the invention of TLD, identification code, linked data registration and publication and data search and retrieve options, the retrievability, equivalency and so on are increased and participation in the internet can grow considerably. While the Zatti publication describes a uniform system of identification codes (name scheme), the method according to the present invention differs herefrom, among other ways in that no unitary method of

identification is described in Zatti but a linking of a plurality of identification systems. This provides no solution, particularly at user level. The Zatti publication merely creates through identification a distinction between objects or names, while the present invention, in addition to creating a distinction, also increases the functionality and the transparency of the internet when compared to the present internet. Nor does the Zatti publication establish any relation with internet applications.

The German publication by T. Weihrich: "Filofax fürs Internet", CT Magazin für Computer Technik, DE, Verlag Heinz Heise GMBH, Hannover, number 10, 1 October 1997 (1997-10-01), pages 346-348, 350-355, XP000701086, ISSN: 0724-8679, describes the necessity of the presence of a 'Domain Name Server' (DNS) to find the Internet Protocol (IP) address associated with a URL/domain name. Since the IP addresses consist of a twelve-digit combination and there is lack of a structure and logic, a DNS is essential. The URLs/domain names are purely for the purpose of improving the user-friendliness of the internet and serve purely as aid. The actual communication proceeds via the IP addresses. The DNS has the task of establishing the link from URL/domain name to associated IP address and vice-versa. Due to the limited nature of the available internet domains and the increasing degree of large-scale buying up of domain names, different internet organisations and internet providers have been discussing an increase in the available TLDs and associated organization. Up until now the American government has obstructed such an increase. This publication argues the case for a logic in the IP addresses, referring to the URLs/domain names, so that a DNS will ultimately become unnecessary, and also argues for an increase in the number of available internet addresses. Even in combination with the above discussed publication by Zatti, the Weihrich publication does not provide the method according to the invention, with which a highly simplified communication on the internet is made possible with an essentially different definition of URLs/domain names. An additional difference between the Weihrich publication and the present invention is that the method as stated in the publication has a purely technical objective in which the user is not directly involved, while in the present invention, on the contrary, the method is specifically designed for the user.

The method preferably also comprises the processing steps of: i) incorporating registered data of entities in data files, j) incorporating the data files in a search system, and k) providing an interface with search options for generating on request results such as for instance URLs/domain names as a response to a query. The method can herein be applied within Top Level Domains and/or Sub Level Domains designed specifically for this purpose. A search engine which operates by means of the method according to the invention searches on the basis of register data. This data is registered in combination with and linked to a URL/domain. Through registration of relevant (search) terms in the register it is possible to search simply and effectively and there results a clearer relation between query and the result which can be anticipated. Search terms are defined by making use of register data, searching is simplified and the result more transparent and more readily predictable. There also results a defined relationship between query and the result which can be expected. The search field can preferably be directly limited to a group of subscribers via the search engine by entering search terms such as for instance country, area or sector. By making use of a TLD with function-oriented notation rules based on identification codes a strong relation can be created between TLD, URL/domain and the ultimate use function. Although the naming within the TLD thereby becomes restrictive, the functionality will hereby still be improved and options for use will be more effective and more focussed.

The invention also provides an assembly of hardware and software for applying said method, comprising a network of servers for designating and making available the URLs/domain names, at least one database coupled to the network of servers and having registered data of entities of URLs/domain names, and hardware and software for inputting, localizing and presenting the registered data. The properties of the servers can be multi-functional, i.e. a server can both make available and designate a URL/domain name. It could also be that each server is assigned its own task, so that for instance the one server is adapted to make available a URL/domain name and the other server to designate this URL/domain name. Updates can optionally be made at determined times on a secondary server of the operational primary servers, so that if a primary server breaks down, contact can be made with a secondary server, whereby the available URLs/domain names can always be retrieved, even after breakdown of a primary server.

The invention will be elucidated with reference to the non-limitative embodiments shown in the following figures. Herein:

figure 1 shows a schematic view of a system of identification codes based on telephone numbers and the associated (mobile) number network,

figure 2 shows a schematic view of a second system of identification codes showing some resemblance to the system according to figure 1,

figure 3 shows a schematic view of a third system of newly designed identification codes showing some resemblance to the systems according to figures 1 and 2,

figure 4 is a schematic view of a fourth system of identification codes showing some resemblance to the systems according to figures 1, 2 and 3,

figure 5 is a schematic view of a method according to the invention for finding a URL,

figure 6 is a schematic view of a network for finding a URL/domain name according to the invention , and

figure 7 is a schematic view of the successive processing steps according to the present invention for applying for a new URL/domain name.

Figure 1 shows an example of a system 1 of identification codes based on telephone numbers and an associated (mobile) network. This system 1 of identifications is based on an already existing system of identifications, i.e. the existing system of unique subscriber numbers and area codes for telephone traffic. The system 1 of identification codes comprises internet addresses (URLs/domain names) 2 which are built up of a host 3, a sub-level domain 4 and a top-level domain 5. The URLs/domain names can also have a different detail structure, for instance by using dashes or other characters instead of dots. A national internet address 6 can be formulated per country, in which sub-level domain 4 is linked to the telephone code of the country in question. The top level domain 5 can consist of a register extension 7. This latter is chosen from a limited group of available register extensions (uni) such that each country preferably has the same register extension. An area internet address 8 preferably has the register extension 7 of the country associated with the area. The area code of the relevant area is preferably chosen as sub-level domain 4. Just as the area internet address 8, a subscriber address 9 preferably has the register extension 7 of the relevant country. Sub-level domain 4 comprises the (ten-digit Dutch) telephone number of the subscriber. On each country or

area site it is possible to search in a register (not shown) of subscriber data using diverse key words. References can also be made to search engines, geographical maps, translation services, service numbers and so on.

Figure 2 shows a second example of a system 10 for identifications based on telephone numbers and associated (mobile) number network. A choice has been made to opt for a uniform host 3, a sub-level domain 4 and top-level domain 5, and to place after top-level domain 5 a separator 11, in this example a "/" character, after which is placed the country code, area code or telephone number of the subscriber to be visited.

Figure 3 shows a third example of a system 12 of identification codes based on codes and associated network. System 12 of identification codes is based on a new code system still to be further defined. The top-level domain 5 is preferably pre-assigned. The sub-level domain 4 comprises a country code, country code with area code, or country code with area code in combination with subscriber code.

Figure 4 shows a fourth example of a system 13 of identification codes based on codes and associated network. As according to figure 3, the system 13 of identifications is based on codes still to be further defined. A choice has been made to opt for a uniform host 3, sub-level domain 4 and top-level domain 5, and to place after top-level domain 5 a separator 11, in this example a "/" character, after which is placed the country code, area code or telephone code of the subscriber to be visited.

Figure 5 shows a scheme 14 for finding a URL 2. User 15 has the option of finding country sites 6, area sites 8 or sites of subscribers 9 by means of telephone directories, information services and the like. If the URL 2 of for instance a subscriber is known, this can then be visited directly. If this URL 2 is not known, it is then possible to search for a desired site at a level higher (country or area) using search engines or other links (hyperlinks).

Figure 6 shows a network 16 for finding a URL 2. A symbolizes the browser of a user which is linked to a network 16 of servers 17. Browser A makes a connection with a

search page B via one or more servers. A query entered on search page B by a user (not shown) is directed by means of one or more servers to a database 18. Database 18 has the capacity to link the queries entered on search page B to search results with associated URLs 2. The search results is sent over the network 16 of servers 17 and can then be received and published by browser A.

Figure 7 shows a sequence 19 of processing steps for applying for a new URL or subscriber identification 27. Step 20 describes inputting of a new Dutch subscriber 27 or entity with the local telephone number 28 of 0413-342829. Linked to the new subscriber in step 21 is a specific identification code 29, which in this example is the complete international telephone number of the subscriber, 0031-0413-342829. In step 22 identification code 29 is linked to a unique URL 30, www.0031-0413-342829.uni. In step 23 the personal data 31 of subscriber 27, such as name, address, sector, speciality etc., are then registered. In step 24 the registered data 31 of subscriber 27 is made accessible to the public via URL 30 in the form of a web page on internet. This web page is referred to as a data carrier 32. A third party can retrieve the registered data 31 (step 25) using a browser (not shown) by making use of a search engine or directly via URL 30. In step 26 the results found on the basis of the queries made in step 25 are presented. The data carrier 32 with registered data 32 are now accessible to the third party. For reasons of privacy, sensitive information or other reasons sites can optionally be screened from the public domain or protected by a password.

Claims

1. Method of identifying and registering entities, in particular for internet applications, comprising the processing steps of:

a) defining a URL/domain name system in accordance with a system of identification codes,

b) formulating URL/domain name notation rules in accordance with the defined system of identification codes, and

c) designating codes and the associated URLs/domain names on the basis of the defined system of identification codes and in accordance with the formulated URL/domain name notation rules.

2. Method as claimed in the foregoing claim, **characterized in that** the method also comprises the processing steps of:

d) registering data of entities,

e) creating a data carrier on the basis of the registered data, and

f) linking the data carrier to a specific URL/domain name.

3. Method as claimed in the claim 2, **characterized in that** the method also comprises the processing step of:

g) making specific URLs/domain names accessible to the public.

4. Method as claimed in the claim 2 or 3, **characterized in that** the method also comprises the processing step of:

h) providing services by means of a data carrier.

5. Method as claimed in any of the claims 2-4, **characterized in that** the method also comprises the processing steps of:

i) incorporating registered data of entities in data files,

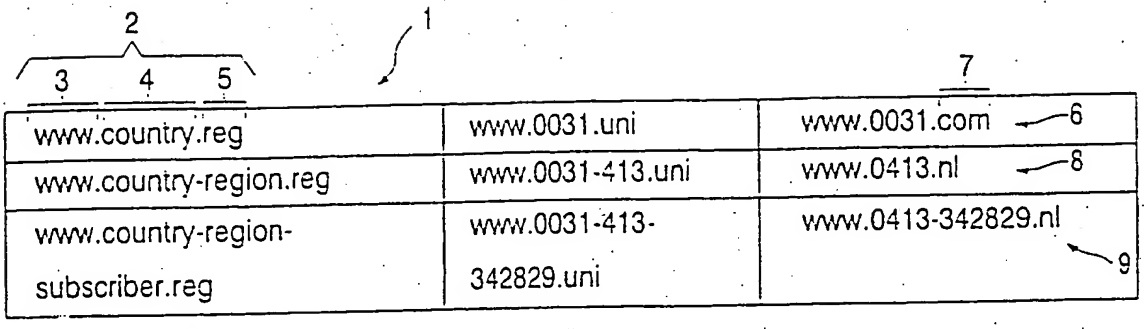
j) incorporating the data files in a search system, and

k) providing an interface with search options for generating results on request as a response to a query.

6. Method as claimed in one or more of the foregoing claims, characterized in that the method is applied within specific Top Level Domains and/or Sub Level Domains.

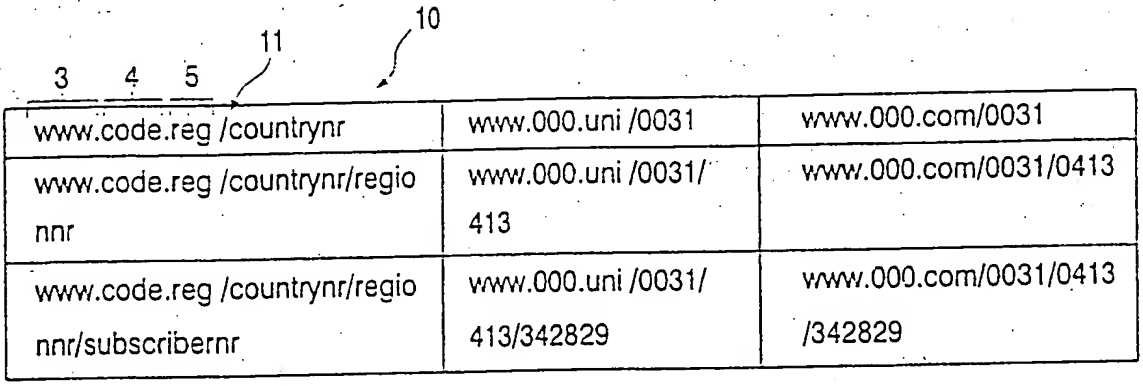
7. Assembly of hardware and software for applying the method as claimed in any of the foregoing claims, comprising:

- a network of servers for designating and making available the URLs/domain names,
- at least one database coupled to the network of servers and having registered data of entities of URLs/domain names, and
- hardware and software for inputting, localizing and presenting the registered data.



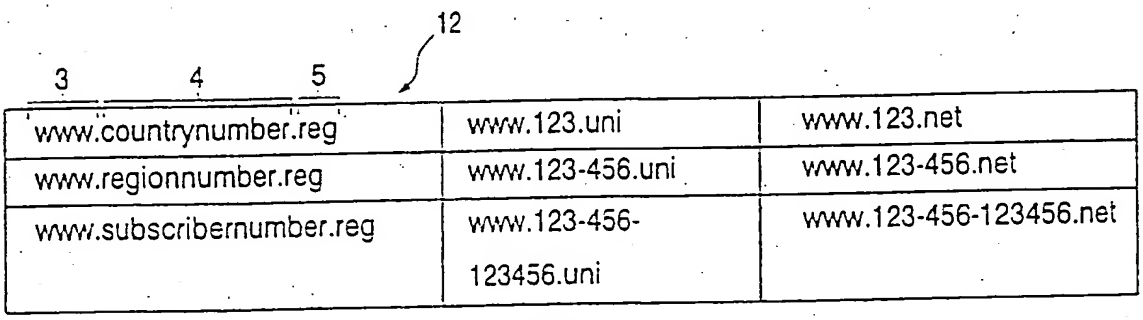
www.country.reg	www.0031.uni	www.0031.com
www.country-region.reg	www.0031-413.uni	www.0413.nl
www.country-region-subscriber.reg	www.0031-413-342829.uni	www.0413-342829.nl

FIG. 1



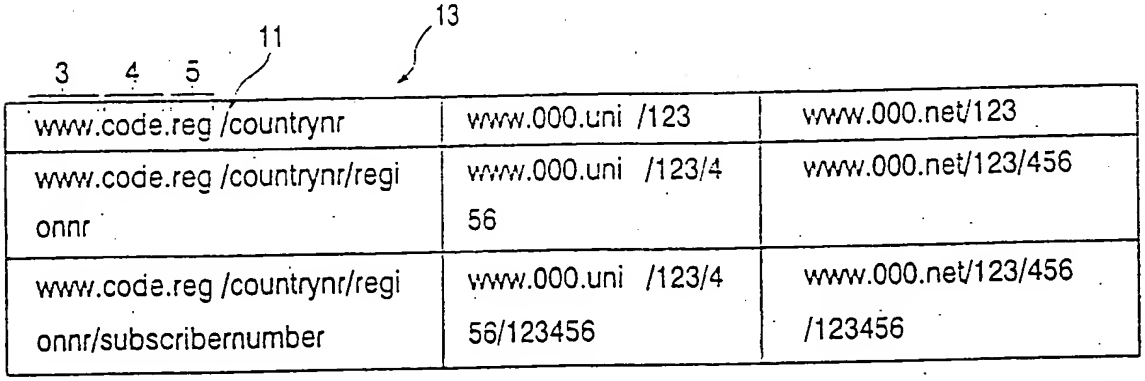
www.code.reg /countrynr	www.000.uni /0031	www.000.com/0031
www.code.reg /countrynr/regionnr	www.000.uni /0031/413	www.000.com/0031/0413
www.code.reg /countrynr/regionnr/subscribernr	www.000.uni /0031/413/342829	www.000.com/0031/0413/342829

FIG. 2



www.countrynumber.reg	www.123.uni	www.123.net
www.regionnumber.reg	www.123-456.uni	www.123-456.net
www.subscribernumber.reg	www.123-456-123456.uni	www.123-456-123456.net

FIG. 3



www.code.reg /countrynr	www.000.uni /123	www.000.net/123
www.code.reg /countrynr/regionnr	www.000.uni /123/456	www.000.net/123/456
www.code.reg /countrynr/regionnr/subscribernumber	www.000.uni /123/456/123456	www.000.net/123/456/123456

FIG. 4

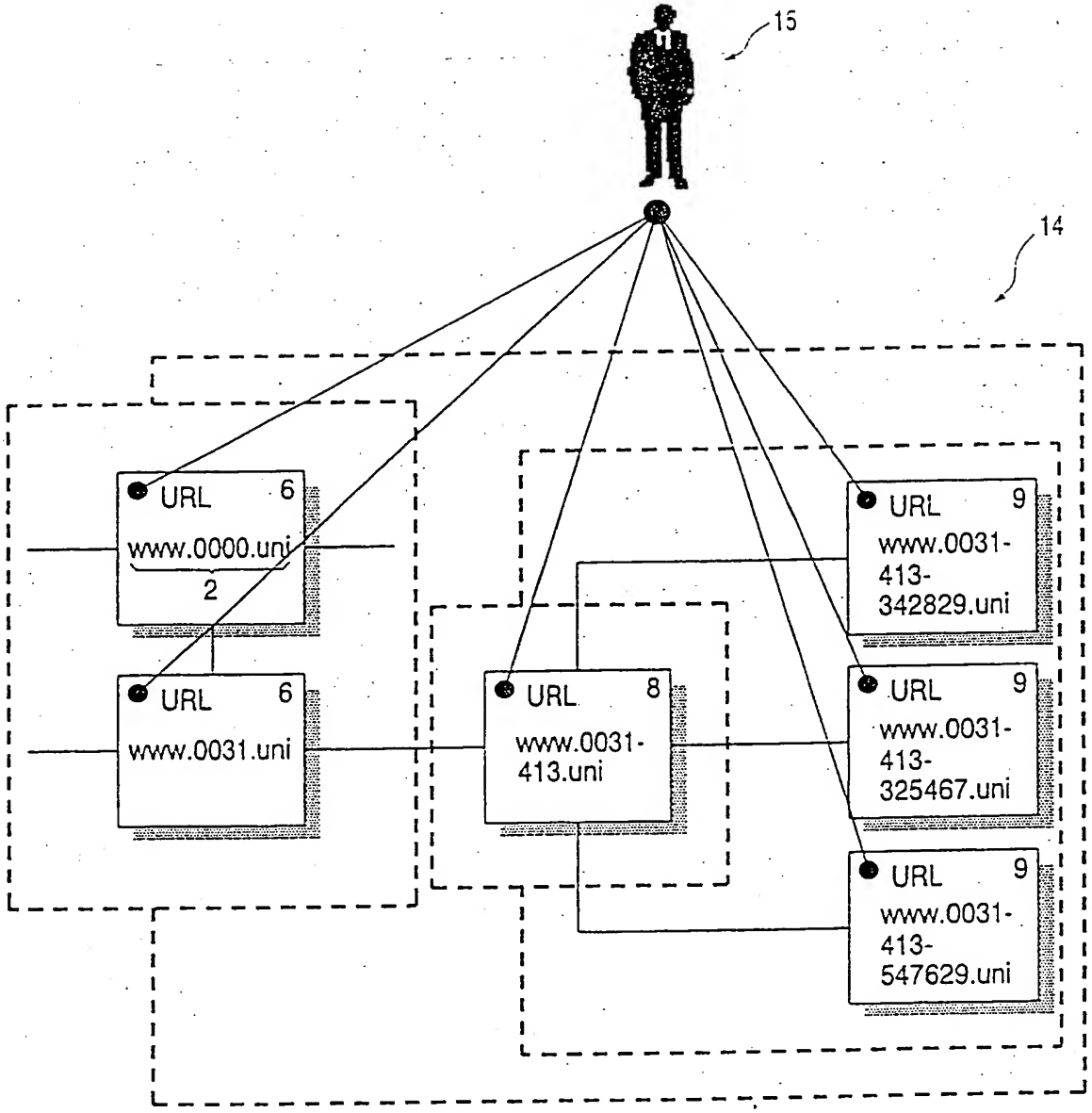

15
14
URL 6
www.0000.uni
2
URL 6
www.0031.uni
URL 8
www.0031-
413.uni
URL 9
www.0031-
413-
342829.uni
URL 9
www.0031-
413-
325467.uni
URL 9
www.0031-
413-
547629.uni

FIG. 5

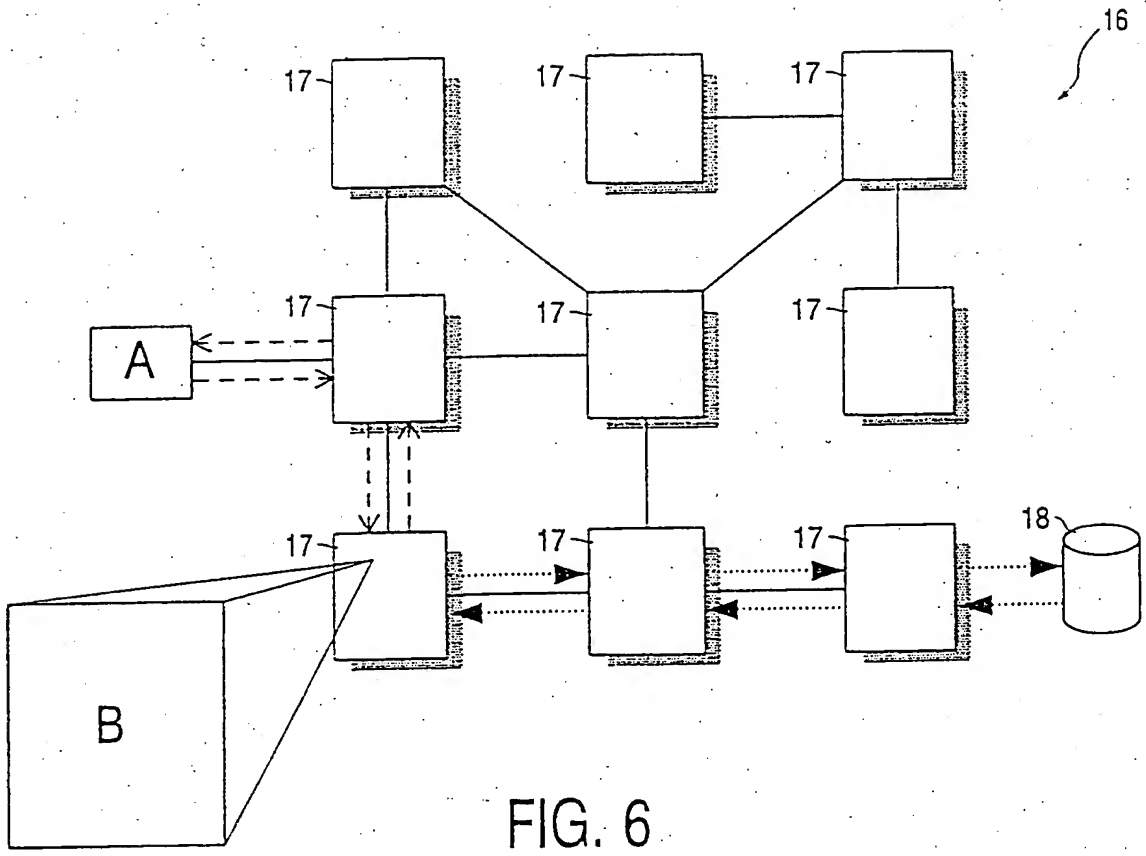


FIG. 6

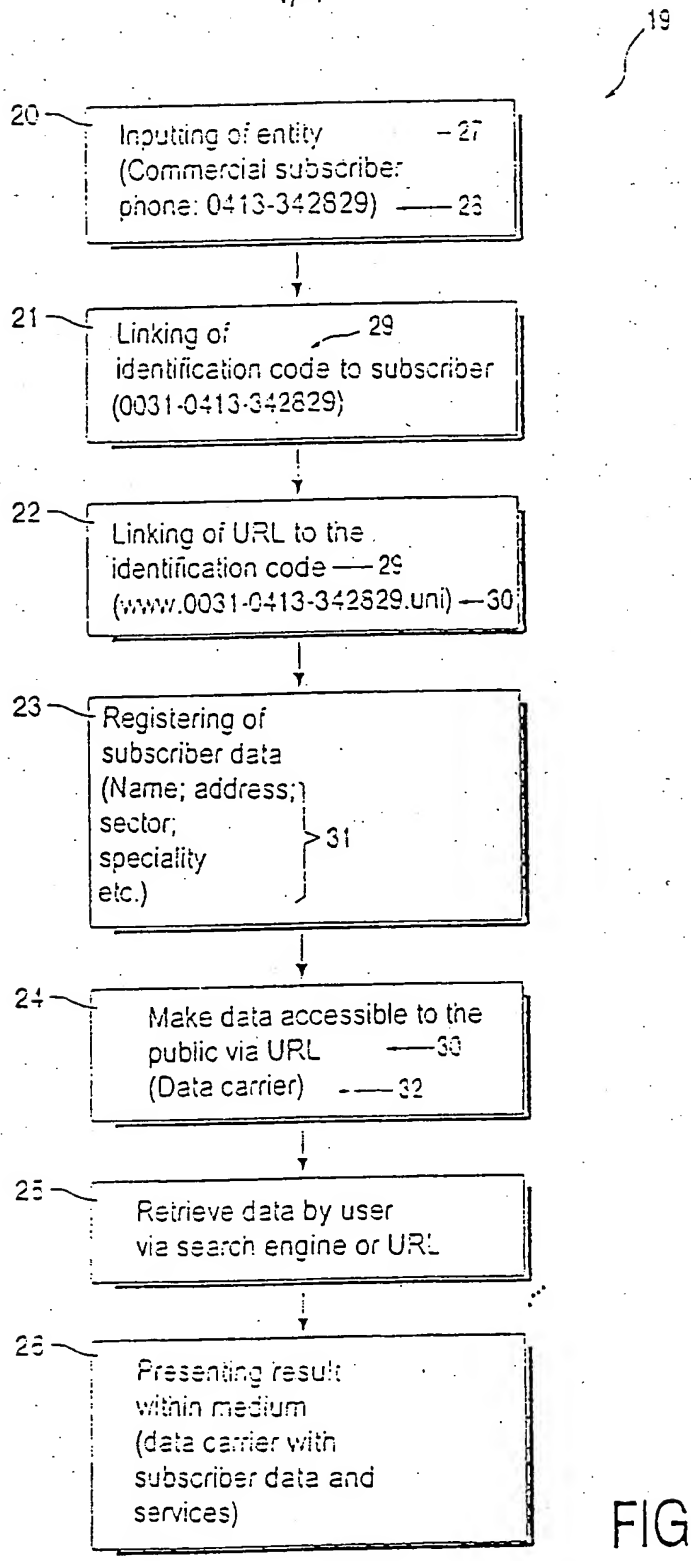

19
20
Inputting of entity
(Commercial subscriber
phone: 0413-342829)
27
28
21
Linking of
identification code to subscriber
(0031-0413-342829)
29
22
Linking of URL to the
identification code
(www.0031-0413-342829.uni)
29
30
23
Registering of
subscriber data
(Name; address;
sector;
speciality
etc.)
31
24
Make data accessible to the
public via URL
(Data carrier)
30
32
25
Retrieve data by user
via search engine or URL
26
Presenting result
within medium
(data carrier with
subscriber data and
services)

FIG. 7

INTERNATIONAL SEARCH REPORT

International Application No
PC[redacted] 00/00539

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06 H04L29/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, INSPEC, WPI Data, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	ZATTI S: "NAMING IN OSI: DISTINGUISHED NAMES OR OBJECT INDENTIFIERS?" PROCEEDINGS OF THE ANNUAL EUROPEAN COMPUTER CONFERENCE. (COMPEURO),US,LOS ALAMITOS, IEEE. COMP. SOC. PRESS, vol. CONF. 5, 1991, pages 258-262, XP000252701 cited in the application page 258, left-hand column, line 50 -page 259, right-hand column, line 12	1,7
A	--- -/--	2-6

[X] Further documents are listed in the continuation of box C.

[ ] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
28 November 2000	05/12/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Mikkelsen, C

1

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

[redacted] Application No
PCT[redacted] 00/00539

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WEIHRICH T: "FILOFAX FUERS INTERNET" CT MAGAZIN FUER COMPUTER TECHNIK,DE,VERLAG HEINZ HEISE GMBH., HANNOVER, no. 10, 1 October 1997 (1997-10-01), pages 346-348,350-35, XP000701086 ISSN: 0724-8679 cited in the application page 347	1,7
A	-----	2-6

1

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
002.1086 WO		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/NL00/00539	28/07/2000	28/07/1999
International Patent Classification (IPC) or national classification and IPC H04L29/06		
Applicant HIJL, Benno, Henricus, Nicolaas		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 11 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
28/02/2001	06.11.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Hamer, J Telephone No. +49 89 2399 8827

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NL00/00539

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, pages:

1-9	as received on	17/10/2001	with letter of	17/10/2001

Claims, No.:

1-7	as received on	17/10/2001	with letter of	17/10/2001

Drawings, sheets:

1/4-4/4	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   - ☐ the description, pages:
   - ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1-7.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1,7 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

III- No Opinion

1. The subject-matter of claim 1 is very broadly and generally stated. This makes it difficult for a reader to understand how the claim might be implemented. It appears from the wording of the claim that a person who is to be identified and registered already has an identification code. The claim has three method steps:

   (a) defining a URL/domain name system in accordance with a system of the identification codes,

   (b) formulating URL/domain name notation rules in accordance with the system of identification codes, and

   (c) designating codes and URL/domain names on the basis of the defined system of identification codes and in accordance with the formulated URL/domain name notation rules and implementing at least a part of the URL/domain names in the Internet..

   It is not clear what any of these features mean. It appears that some system with rules will be defined and that in this system, a correspondence of the existing identification codes will be made to URL/domain names and that essentially a translation of the identification code into an URL/domain name will follow. However, a skilled person would be unable to implement anything specific using the wording of the claim. He would need to know what the system is, what the identification codes are, what the accordance is, what the rules and their accordances are, how to designate the codes on the basis of the codes and what the accordance of this with the notation rules is. The claim contains no hint as to how any of this could be done.

2. Independent claim 7 is addressed towards an assembly of hardware and software for applying the method. As this method is unclear (see above), claim 7 suffers from the same deficiencies as claim 1.

3. Dependent claims 2 to 6 only add further method steps to an already unclear claim 1. None of these steps disclose features which would enable the invention to be implemented, i.e. which define the system, the rules or the designations or accordances.

VII- Certain Defects

The following deficiencies are found in the application:

a) The independent claims do not meet the requirements of Rule 6.3(b) PCT in that they are not divided into the two-part form.

10/031883
Rec'd PCT/PTO 25 JAN 2002

Method of identifying and registering persons and an assembly of hardware and software for applying such a method

The invention relates to a method of identifying and registering persons, in particular for internet applications, and to an assembly of hardware and software for applying such a method.

The internet is a fast-growing medium which, from a communication viewpoint, consists of Top Level Domains (TLDs), internet addresses (Uniform Resource Locators (URLs)), internet sites with information, search engines, users and access providers. Top Level Domains such as "com", "net", "org", "edu", "gov", "mil" etc. are defined on the basis of a worldwide open organization structure. The structure of naming is based on internationally standardized character sets. There are also Sub-Level Domains (SLDs) which are country-specific: "us", "uk", "nl" etc. The general search engines available are focussed particularly on searching sites by content. The worldwide character and the infinite possibilities in respect of the publication of information and message traffic make it essentially a medium with particularly attractive use potential. It is thought that internet at this moment is at its initial stage. Characteristic of the present situation is that heretofore internet has been designed mainly by engineers and that at the moment the providers and users are located for the most part in industrialized countries. It is expected that the number of users and providers will only increase in the future. Through wider application the internet will also undergo further changes so as to make it more of a user medium with unrivalled possibilities and with a broad, worldwide degree of participation.

Seen from a worldwide viewpoint, there is at the moment quite a low internet participation and a mediocre spread of providers and users. The main causes for this lack of spread, in addition of course to the relatively short existence of internet, are to be found in aspects such as technical possibilities, cost, the anticipated utilization, retrievability, position in respect of for instance competitors and so on. The internet has an essentially worldwide orientation. Powerful options aimed specially at (inter)local and (inter)regional oriented use (other than on SLDs) are lacking. In the present situation on the internet, searching for a URL/domain name is practically only possible via the internet. Within the internet unclear or confusing naming is possible for

URLs/domain names, for instance due to more or less unobstructed use of names of general importance and/or significance. It is generally difficult to be directly retrievable as provider on internet on the basis of URL/domain name. Particularly in the case of frequently occurring names it is in fact impossible to register for each applicant a suitable, distinctive and retrievable URL/domain name. The first registration of a URL/domain name by a user/provider can thus result in a great advantage. An additional drawback of a first registration is that third parties often register URLs/domain names on a large scale having as content the name of for instance a well-known personality or company, whereby the obvious URL/domain name in question is taken, and alleged improper use of a name is thereby made in respect of the alleged entitled person. With the current practice surrounding naming of URLs/domains there is a language and character problem. That is, the problem that in written form each language or group of languages employs its own set of letters and characters. Search engines therefore have the limitation in respect of the following: as search result for a search term in a particular language all that is generally obtained is the information found which is available in the same language. National languages hereby acquire a significant influence in all information queries, this while language could be an insignificant aspect of countless queries or need not represent a barrier. The use of URLs/domain names is often difficult because the URLs/domain names are often too long and complicated. The URL notation moreover contains little functional logic. Search engines often have a worldwide orientation in terms of technical possibilities but, due to the manner of searching by information content in a site and the language barrier which thereby becomes manifest, they are often language-dependent in use and not very regionally oriented. In many of the present search engines on the internet there is an inadequately defined relation between query and result. The present search engines for general purposes search by content in a site on the basis of search terms entered by the user. Searching usually proceeds with difficulty and the search results are in many cases mediocre or poor. Through the manner of searching (for details concerning content), the present information provision and the growth of internet (applications) which can be expected in the future, results of queries based on search terms which are not very specific will to an increasing extent produce unusable results. The use of search engines is generally not intuitive. Specific reduction of the search field in a usual,

intuitive manner (this may be essential for determined queries) prior to a detailed query is scarcely possible with the existing search engines suitable for general use. At the moment TLDs are defined on the basis of a worldwide, open organizational structure with few restrictions in URLs/domain names and they therefore provide few specific options for use.

The publication by S. Zatti: "Naming in OSI: "Distinguished Names or Object Identifiers?", Proceedings of the Annual European Computer Conference (Compeuro), US, Los Alamitos, IEEE, Computer Society Press, part-conference 5, 1991, pages 258-262" describes two identification schemes, i.e. Distinguished Names (DN) and Object Identifiers (OI), which are used on a large scale in an OSI environment. The DN scheme is sufficiently flexible and powerful to provide the worldwide need for names. The OI scheme has the possibility of incorporating special criteria imposed by individual requirements. The problem of these schemes is that in the present form they cannot be integrated into each other, thus creating a need to design a system which, within the possibilities of OSI and worldwide networks, provides a uniform naming scheme to identify all types of objects. The publication proposes a uniform solution, wherein both schemes can exist side by side in one environment, solely through a minimal modification in said schemes.

The present invention has for its object to provide an improved device for registering, addressing, structuring and finding persons and data, particularly for internet applications, while retaining the advantages of the prior art but without the limitations of the prior art. **Persons should in this context be understood as natural persons, legal persons, organisations or objects. The invention is intended to improve the capabilities of searching and finding these persons on the internet and for instance to list the results of a conducted search.**

The present invention provides for this purpose a method of identifying and registering **persons based on existing identification codes**, in particular for internet applications, comprising the processing steps of: a) defining a URL/domain name system in accordance with a system of the identification codes **stored in at least one database**, b)

formulating URL/domain name notation rules in accordance with the defined system of identification codes, and c) designating codes and the associated URLs/domain names on the basis of the defined system of identification codes and in accordance with the formulated URL/domain name notation rules, **and implementing at least a part of the URLs/domain names in the internet.**

The method preferably also comprises the processing steps of: d) registering data of persons, e) creating a data carrier on the basis of the registered data, and f) linking the data carrier to a specific URL/domain name. By replacing names and/or words in a URL/domain name by an identification code associated with a user/provider and registering this in accordance with notation rules suitable for the code there results a better retrievability through a logical and/or known relation between provider or that which is provided and the registered URL/domain name. In addition, this provides the option of finding URLs and information on the internet, at least when the specific URLs/domain names, according to preferred embodiments, are made accessible to the public and/or when services are provided by means of a data carrier, such as for instance the specific URLs/domain names or a page with hyperlinks, by making use of other non-internet-related (search) systems and media which are based on the same system of identifications. When an existing identification code is used, potential registrants can be approached in purposeful manner, wherein use can be made of a possibly already existing search system. Depending on the identification code used, the participation among general or specific groups can hereby be increased. The use of identification codes in a URL/domain name creates a term-free/value-free URL/domain name without any significance in itself. Language problems can be obviated by the use of identification codes and associated structure, even when this involves the permitted characters, which are obviated to a considerable extent in URL naming. The verbal transfer can become easier and more unambiguous due to specific and functionally limiting notation rules. Through the use of identification codes and notation rules the structure of the internet, and therewith the logic, is increased. Making use of the notation rules and the structure ensuing therefrom enables refinement of the search field (at URL level), also without use having to be made of a search engine for this purpose. As the internet grows (users/providers) the functionality can also be increased and transparency can remain ensured. Owing to the combination used according to the

invention of TLD, identification code, linked data registration and publication and data search and retrieve options, the retrievability, equivalency and so on are increased and participation in the internet can grow considerably. While the Zatti publication describes a uniform system of identification codes (name scheme), the method according to the present invention differs herefrom, among other ways in that no unitary method of identification is described in Zatti but a linking of a plurality of identification systems. This provides no solution, particularly at user level. The Zatti publication merely creates through identification a distinction between objects or names, while the present invention, in addition to creating a distinction, also increases the functionality and the transparency of the internet when compared to the present internet. Nor does the Zatti publication establish any relation with internet applications.

The German publication by T. Weihrich: "Filofax fürs Internet", CT Magazin für Computer Technik, DE, Verlag Heinz Heise GMBH, Hannover, number 10, 1 October 1997 (1997-10-01), pages 346-348, 350-355, XP000701086, ISSN: 0724-8679, describes the necessity of the presence of a 'Domain Name Server' (DNS) to find the Internet Protocol (IP) address associated with a URL/domain name. Since the IP addresses consist of a twelve-digit combination and there is lack of a structure and logic, a DNS is essential. The URLs/domain names are purely for the purpose of improving the user-friendliness of the internet and serve purely as aid. The actual communication proceeds via the IP addresses. The DNS has the task of establishing the link from URL/domain name to associated IP address and vice-versa. Due to the limited nature of the available internet domains and the increasing degree of large-scale buying up of domain names, different internet organisations and internet providers have been discussing an increase in the available TLDs and associated organization. Up until now the American government has obstructed such an increase. This publication argues the case for a logic in the IP addresses, referring to the URLs/domain names, so that a DNS will ultimately become unnecessary, and also argues for an increase in the number of available internet addresses. Even in combination with the above discussed publication by Zatti, the Weihrich publication does not provide the method according to the invention, with which a highly simplified communication on the internet is made possible with an essentially different definition of URLs/domain names. An additional

Empfangszeit ...

difference between the Weihrich publication and the present invention is that the method as stated in the publication has a purely technical objective in which the user is not directly involved, while in the present invention, on the contrary, the method is specifically designed for the user.

The method preferably also comprises the processing steps of: i) incorporating registered data of persons in data files, j) incorporating the data files in a search system, and k) providing an interface with search options for generating on request results such as for instance URLs/domain names as a response to a query. The method can herein be applied within Top Level Domains and/or Sub Level Domains designed specifically for this purpose. A search engine which operates by means of the method according to the invention searches on the basis of register data. This data is registered in combination with and linked to a URL/domain. Through registration of relevant (search) terms in the register it is possible to search simply and effectively and there results a clearer relation between query and the result which can be anticipated. Search terms are defined by making use of register data, searching is simplified and the result more transparent and more readily predictable. There also results a defined relationship between query and the result which can be expected. The search field can preferably be directly limited to a group of subscribers via the search engine by entering search terms such as for instance country, area or sector. By making use of a TLD with function-oriented notation rules based on identification codes a strong relation can be created between TLD, URL/domain and the ultimate use function. Although the naming within the TLD thereby becomes restrictive, the functionality will hereby still be improved and options for use will be more effective and more focussed.

The invention also provides an assembly of hardware and software for applying said method, comprising a network of servers for designating and making available the URLs/domain names, at least one database coupled to the network of servers and having registered data of persons of URLs/domain names, and hardware and software for inputting, localizing and presenting the registered data. The properties of the servers can be multi-functional, i.e. a server can both make available and designate a URL/domain name. It could also be that each server is assigned its own task, so that for instance the

one server is adapted to make available a URL/domain name and the other server to designate this URL/domain name. Updates can optionally be made at determined times on a secondary server of the operational primary servers, so that if a primary server breaks down, contact can be made with a secondary server, whereby the available URLs/domain names can always be retrieved, even after breakdown of a primary server.

The invention will be elucidated with reference to the non-limitative embodiments shown in the following figures. Herein:
figure 1 shows a schematic view of a system of identification codes based on telephone numbers and the associated (mobile) number network,
figure 2 shows a schematic view of a second system of identification codes showing some resemblance to the system according to figure 1,
figure 3 shows a schematic view of a third system of newly designed identification codes showing some resemblance to the systems according to figures 1 and 2,
figure 4 is a schematic view of a fourth system of identification codes showing some resemblance to the systems according to figures 1, 2 and 3,
figure 5 is a schematic view of a method according to the invention for finding a URL,
figure 6 is a schematic view of a network for finding a URL/domain name according to the invention , and
figure 7 is a schematic view of the successive processing steps according to the present invention for applying for a new URL/domain name.

Figure 1 shows an example of a system 1 of identification codes based on telephone numbers and an associated (mobile) network. This system 1 of identifications is based on an already existing system of identifications, i.e. the existing system of unique subscriber numbers and area codes for telephone traffic. The system 1 of identification codes comprises internet addresses (URLs/domain names) 2 which are built up of a host 3, a sub-level domain 4 and a top-level domain 5. The URLs/domain names can also have a different detail structure, for instance by using dashes or other characters instead of dots. A national internet address 6 can be formulated per country, in which sub-level domain 4 is linked to the telephone code of the country in question. The top level domain 5 can consist of a register extension 7. This latter is chosen from a limited group

of available register extensions (uni) such that each country preferably has the same register extension. An area internet address 8 preferably has the register extension 7 of the country associated with the area. The area code of the relevant area is preferably chosen as sub-level domain 4. Just as the area internet address 8, a subscriber address 9 preferably has the register extension 7 of the relevant country. Sub-level domain 4 comprises the (ten-digit Dutch) telephone number of the subscriber. On each country or area site it is possible to search in a register (not shown) of subscriber data using diverse key words. References can also be made to search engines, geographical maps, translation services, service numbers and so on.

Figure 2 shows a second example of a system 10 for identifications based on telephone numbers and associated (mobile) number network. A choice has been made to opt for a uniform host 3, a sub-level domain 4 and top-level domain 5, and to place after top-level domain 5 a separator 11, in this example a "/" character, after which is placed the country code, area code or telephone number of the subscriber to be visited.

Figure 3 shows a third example of a system 12 of identification codes based on codes and associated network. System 12 of identification codes is based on a new code system still to be further defined. The top-level domain 5 is preferably pre-assigned. The sub-level domain 4 comprises a country code, country code with area code, or country code with area code in combination with subscriber code.

Figure 4 shows a fourth example of a system 13 of identification codes based on codes and associated network. As according to figure 3, the system 13 of identifications is based on codes still to be further defined. A choice has been made to opt for a uniform host 3, sub-level domain 4 and top-level domain 5, and to place after top-level domain 5 a separator 11, in this example a "/" character, after which is placed the country code, area code or telephone code of the subscriber to be visited.

Figure 5 shows a scheme 14 for finding a URL 2. User 15 has the option of finding country sites 6, area sites 8 or sites of subscribers 9 by means of telephone directories, information services and the like. If the URL 2 of for instance a subscriber is known,

this can then be visited directly. If this URL 2 is not known, it is then possible to search for a desired site at a level higher (country or area) using search engines or other links (hyperlinks).

Figure 6 shows a network 16 for finding a URL 2. A symbolizes the browser of a user which is linked to a network 16 of servers 17. Browser A makes a connection with a search page B via one or more servers. A query entered on search page B by a user (not shown) is directed by means of one or more servers to a database 18. Database 18 has the capacity to link the queries entered on search page B to search results with associated URLs 2. The search results is sent over the network 16 of servers 17 and can then be received and published by browser A.

Figure 7 shows a sequence 19 of processing steps for applying for a new URL or subscriber identification 27. Step 20 describes inputting of a new Dutch subscriber 27 or person with the local telephone number 28 of 0413-342829. Linked to the new subscriber in step 21 is a specific identification code 29, which in this example is the complete international telephone number of the subscriber, 0031-0413-342829. In step 22 identification code 29 is linked to a unique URL 30, www.0031-0413-342829.uni. In step 23 the personal data 31 of subscriber 27, such as name, address, sector, speciality etc., are then registered. In step 24 the registered data 31 of subscriber 27 is made accessible to the public via URL 30 in the form of a web page on internet. This web page is referred to as a data carrier 32. A third party can retrieve the registered data 31 (step 25) using a browser (not shown) by making use of a search engine or directly via URL 30. In step 26 the results found on the basis of the queries made in step 25 are presented. The data carrier 32 with registered data 32 are now accessible to the third party. For reasons of privacy, sensitive information or other reasons sites can optionally be screened from the public domain or protected by a password.

Claims

1. Method of identifying and registering **persons (9,27) based on existing identification codes**, in particular for internet applications, comprising the processing steps of:

a) defining a URL/domain name system (2) in accordance with a system of **the** identification codes **(1,10,12,13,29) stored in at least one database,**

b) formulating URL/domain name notation rules in accordance with the defined system of identification codes **(1,10,12,13,29)**, and

c) designating codes and the associated URLs/domain names (30) on the basis of the defined system of identification codes **(1,10,12,13,29)** and in accordance with the formulated URL/domain name notation rules, **and implementing at least a part of the URLs/domain names (30) in the internet.**

2. Method as claimed in the foregoing claim, **characterized in that** the method also comprises the processing steps of:

d) registering data (31) of **persons (9,27)**,

e) creating a data carrier (32) on the basis of the registered data **(31)**, and

f) linking the data carrier **(32)** to a specific URL/domain name **(30)**.

3. Method as claimed in the claim 2, **characterized in that** the method also comprises the processing step of:

g) making specific URLs/domain names (30) accessible to the public.

4. Method as claimed in the claim 2 or 3, **characterized in that** the method also comprises the processing step of:

h) providing services by means of a data carrier **(32)**.

5. Method as claimed in any of the claims 2-4, **characterized in that** the method also comprises the processing steps of:

i) incorporating registered data of **persons (9,27)** in data files,

j) incorporating the data files in a search system **(18)**, and

k) providing an interface with search options for generating results on request as a response to a query.

6. Method as claimed in one or more of the foregoing claims, **characterized in that** the method is applied within specific Top Level Domains (5) and/or Sub Level Domains (4).

7. Assembly of hardware and software for applying the method **of identifying and registering persons (9,27) based on existing identification codes, in particular for internet applications, comprising the processing steps of: a) defining a URL/domain name system (2) in accordance with a system of the identification codes (1,10,12,13,29) stored in at least one database, b) formulating URL/domain name notation rules in accordance with the defined system of identification codes (1,10,12,13,29), and c) designating codes and the associated URLs/domain names (30) on the basis of the defined system of identification codes (1,10,12,13,29) and in accordance with the formulated URL/domain name notation rules, and implementing at least a part of the URLs/domain names (30) in the internet.**, comprising:

- a network (16) of servers (17) for designating and making available the URLs/domain names (30),
- at least one database coupled to the network of servers and having registered data (31) of persons (9,27) of URLs/domain names (30), and
- hardware and software for inputting, localizing and presenting the registered data (31).

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PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

PCT/NL 00/00539
International Application No.

28 JULI 2000
International Filing Date (28.07.00)

BUREAU VOOR DE INDUSTRIËLE EIGENDOM
PCT INTERNATIONAL APPLICATION
Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum) 00.2.1086 WO

Box No. I TITLE OF INVENTION Method of identifying and registering entities and an assembly of hardware and software for applying such a method

Box No. II APPLICANT

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

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[X] This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State *(that is, country)* of nationality: NL

State *(that is, country)* of residence: NL

This person is applicant for the purposes of: [X] all designated States [ ] all designated States except the United States of America [ ] the United States of America only [ ] the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:
[ ] applicant only
[ ] applicant and inventor
[ ] inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is,country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of: [ ] all designated States [ ] all designated States except the United States of America [ ] the United States of America only [ ] the States indicated in the Supplemental Box

[ ] Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: [ ] agent [ ] common representative

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

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-

[ ] **Adress for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

SUBSTITUTE SHEET (RULE 2)

PCT REQUEST 0021086 WO

Original (for **SUBMISSION**) - printed on 28.07.2000 11:59:43 AM

V	**Designation f States**	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH&LI CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
VI-1	**Priority claim of earlier national application**	
VI-1-1	Filing date	28 July 1999 (28.07.1999)
VI-1-2	Number	1012721
VI-1-3	Country	NL
VI-2	**Priority document request** The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	**International Searching Authority Chosen**	European Patent Office (EPO) (ISA/EP)
VII-2	**Request to use results of earlier search; reference to that search**	
VII-2-1	Date	30 June 2000 (30.06.2000)
VII-2-2	Number	NL 1012721
VII-2-3	Country (or regional Office)	EP

VIII	**Check list**	number of sheets	electronic file(s) attached
VIII-1	Request	3	-
VIII-2	Description	9	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	0021086_abstract.txt
VIII-5	Drawings	4	-
VIII-7	TOTAL	19	

PCT REQUEST

0021086 WO

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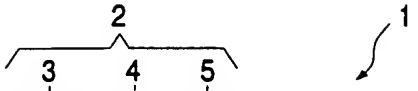
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	**Figure of the drawings which should accompany the abstract**	5	
VIII-19	**Language of filing of the international application**	Dutch	
IX-1	**Signature of applicant or agent**		
IX-1-1	Name (LAST, First)	VAN DEN HEUVEL, Henricus, Theodorus	

FOR RECEIVING OFFICE USE ONLY

10-1	**Date of actual receipt of the purported international application**	28 JUL. 2000 (28.07.00)
10-2	**Drawings:**	
10-2-1	Received	Received.
10-2-2	Not received	
10-3	**Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application**	
10-4	**Date of timely receipt of the required corrections under PCT Article 11(2)**	
10-5	**International Searching Authority**	ISA/EP
10-6	**Transmittal of search copy delayed until search fee is paid**	

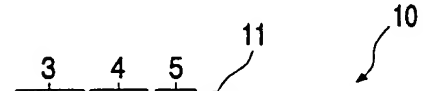
FOR INTERNATIONAL BUREAU USE ONLY

11-1	**Date of receipt of the record copy by the International Bureau**	23 AUGUST 2000 (23.08.00)



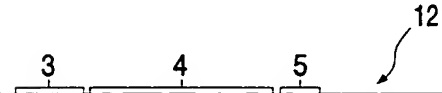
www.country.reg	www.0031.uni	www.0031.com 6
www.country-region.reg	www.0031-413.uni	www.0413.nl 8
www.country-region-subscriber.reg	www.0031-413-342829.uni	www.0413-342829.nl 9

FIG. 1



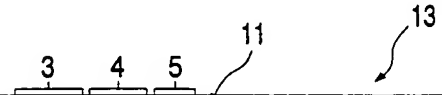
www.code.reg /countrynr	www.000.uni /0031	www.000.com/0031
www.code.reg /countrynr/regionnr	www.000.uni /0031/413	www.000.com/0031/0413
www.code.reg /countrynr/regionnr/subscribernr	www.000.uni /0031/413/342829	www.000.com/0031/0413/342829

FIG. 2



www.countrynumber.reg	www.123.uni	www.123.net
www.regionnumber.reg	www.123-456.uni	www.123-456.net
www.subscribernumber.reg	www.123-456-123456.uni	www.123-456-123456.net

FIG. 3



www.code.reg /countrynr	www.000.uni /123	www.000.net/123
www.code.reg /countrynr/regionnr	www.000.uni /123/456	www.000.net/123/456
www.code.reg /countrynr/regionnr/subscribernumber	www.000.uni /123/456/123456	www.000.net/123/456/123456

FIG. 4

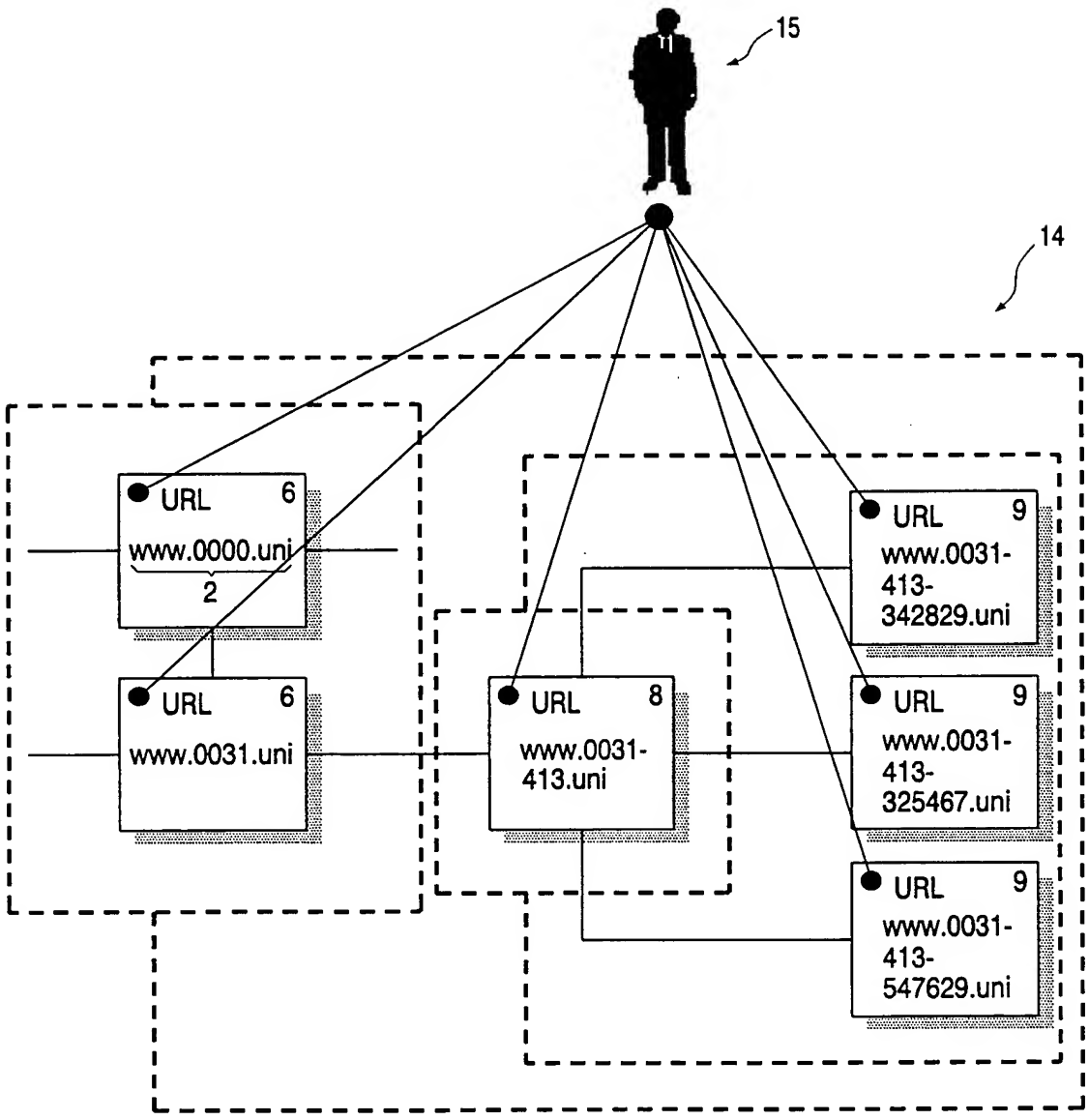

15
14
URL 6
www.0000.uni
2
URL 6
www.0031.uni
URL 8
www.0031-
413.uni
URL 9
www.0031-
413-
342829.uni
URL 9
www.0031-
413-
325467.uni
URL 9
www.0031-
413-
547629.uni

FIG. 5

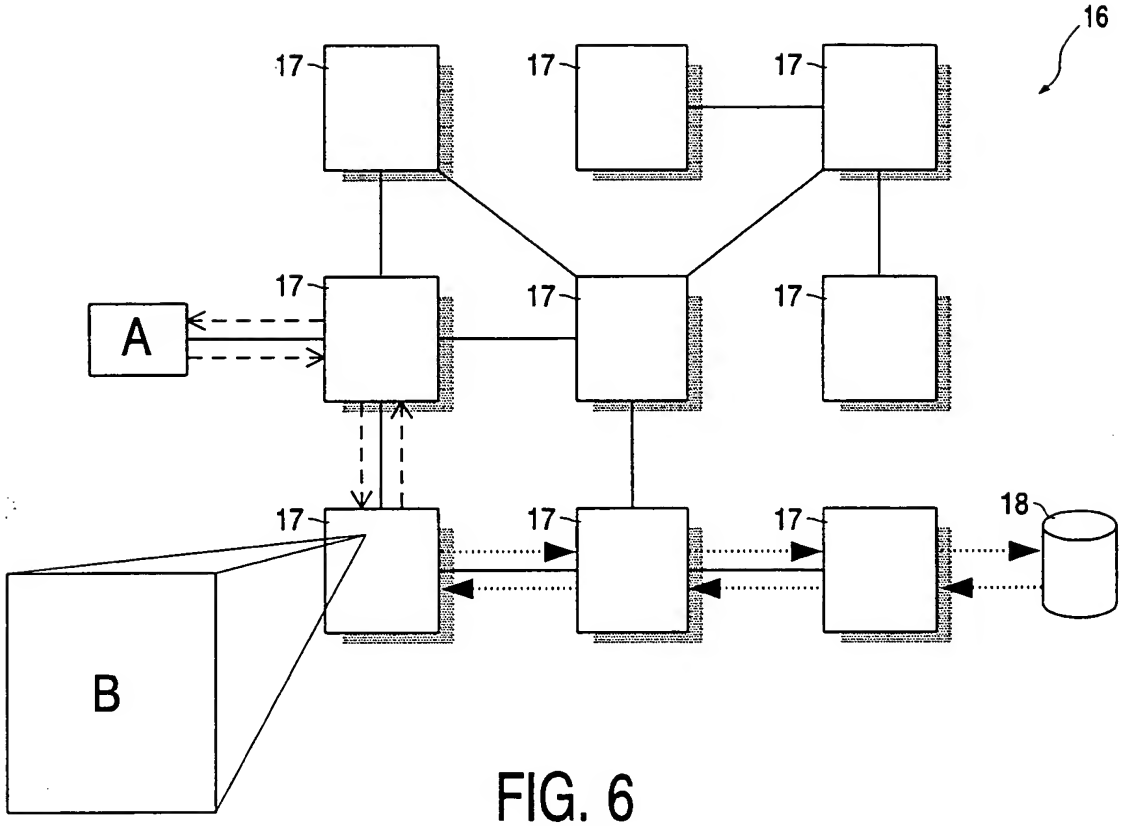


FIG. 6

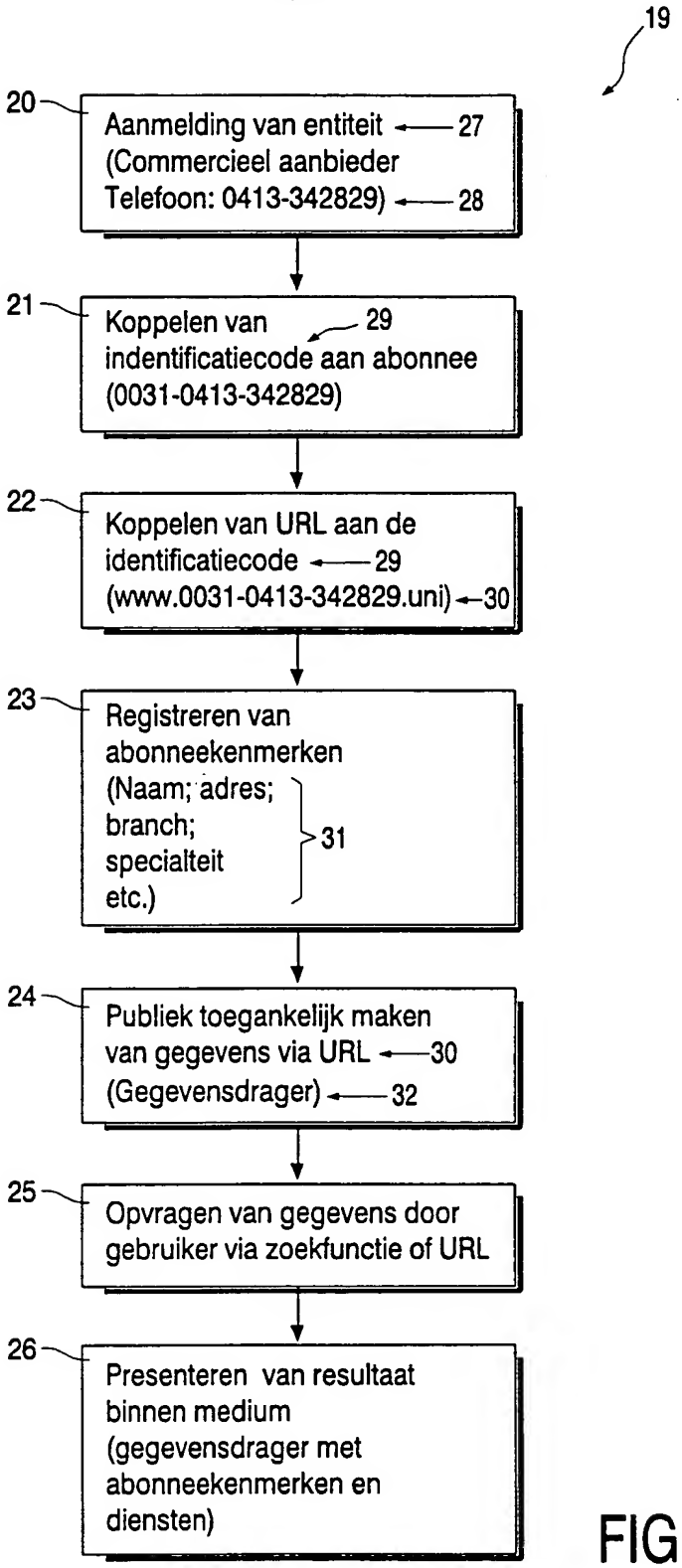

19
20
Aanmelding van entiteit 27
(Commercieel aanbieder
Telefoon: 0413-342829) 28
21
Koppelen van 29
indentificatiecode aan abonnee
(0031-0413-342829)
22
Koppelen van URL aan de
identificatiecode 29
(www.0031-0413-342829.uni) 30
23
Registreren van
abonneekenmerken
(Naam; adres;
branch;
specialteit
etc.) 31
24
Publiek toegankelijk maken
van gegevens via URL 30
(Gegevensdrager) 32
25
Opvragen van gegevens door
gebruiker via zoekfunctie of URL
26
Presenteren van resultaat
binnen medium
(gegevensdrager met
abonneekenmerken en
diensten)

FIG. 7

Werkwijze voor identificeren en registreren van entiteiten en een samenstel van hardware en software voor het toepassen van een dergelijke werkwijze

De uitvinding heeft betrekking op een werkwijze voor identificeren en registreren van entiteiten, in het bijzonder voor internettoepassing, en op een samenstel van hardware en software voor het toepassen van een dergelijke werkwijze.

Het internet is een snelgroeiend medium dat vanuit communicatie-oogpunt bestaat uit Top Level Domains (TLD's), internetadressen (Uniform Resource Locators (URL's)) internetsites met informatie, zoekmachines, gebruikers en aanbieders. Top Level Domains zoals "com", "net", "org", "edu", "gov", "mil" et cetera zijn gedefinieerd op basis van een wereldwijde open organisatiestructuur. De structuur van de naamgeving is gebaseerd op internationaal gestandaardiseerde karaktersets. Verder bestaan er ook Sub . Level Domains (SLD's) die landspecifiek zijn; "us", "uk", "nl" et cetera. De beschikbare algemene zoekmachines zijn vooral gericht op het zoeken op de inhoud van sites. Het wereldwijde karakter en de oneindige mogelijkheden met betrekking tot de publicatie van informatie en het berichtenverkeer, maakt het in essentie een medium met bijzonder aantrekkelijke gebruiksmogelijkheden. Naar verwachting bevindt het internet zich op dit moment nog in een beginfase. Kenmerkend voor de huidige situatie is, dat het internet tot op heden vooral door technici is vormgegeven en dat de aanbieders en gebruikers zich op dit moment voor het grootste deel bevinden in geïndustrialiseerde landen. In de toekomst zal naar verwachting het aantal gebruikers en aanbieders alleen maar toenemen. Verder zal het internet door de bredere toepassing verdere wijzigingen ondergaan om het meer een gebruikersmedium te maken met ongekende mogelijkheden en met een brede, wereldwijde participatiegraad.

Wereldwijd bezien bestaat er momenteel een vrij lage internet-participatie en matige spreiding van aanbieders en gebruikers. De voornaamste oorzaken voor dit gebrek aan spreiding zijn, naast natuurlijk het relatief korte bestaan van internet, gelegen in aspecten zoals technische mogelijkheden, kosten, het te verwachten rendement, vindbaarheid, positie ten opzichte van bijvoorbeeld concurrenten et cetera. Het internet is in essentie wereldwijd georiënteerd. Krachtige mogelijkheden speciaal gericht op (inter)lokaal en (inter)regionaal georiënteerd gebruik (anders dan op SLD's) ontbreken. In de huidige situatie op het internet is het zoeken naar een URL/domeinnaam vrijwel

alleen mogelijk via het internet. Binnen internet is onduidelijke of versluierende naamgeving voor URL's/domeinnamen mogelijk, bijvoorbeeld door min of meer onbelemmerd gebruik van namen met algemeen belang en/of betekenis. In algemeenheid is het lastig om als aanbieder op internet direct vindbaar te zijn op basis van URL/domeinnaam. Vooral bij veelvoorkomende namen is het eigenlijk onmogelijk om voor elke aanvrager een passende, onderscheidende en vindbare URL/domeinnaam te registreren. De eerste registratie door een gebruiker/ aanbieder van een URL/domeinnaam kan aldus leiden tot een groot voordeel. Een bijkomend nadeel van een eerste registratie is dat derden vaak op grote schaal URL's/domeinnamen met als content de naam van bijvoorbeeld een bekende persoonlijkheid of bedrijf registreren, waardoor de betreffende voor de hand liggende URL/domeinnaam is vergeven en daarmee vermeend naammisbruik ten opzichte van de vermeend rechthebbende wordt gepleegd. Met de huidige praktijk rond de naamgeving van URL's/domeinen is sprake van een taal- en tekenprobleem. Dit wil zeggen, het probleem dat elke taal of groep van talen in schrift een eigen set van letters en karakters hanteert. Zoekmachines hebben dus de beperking die betrekking heeft op het volgende: als zoekresultaat van een zoekbegrip in een bepaalde taal krijgt men over het algemeen alleen de gevonden informatie die beschikbaar is in diezelfde taal. Landstalen krijgen hierdoor een belangrijke invloed in alle informatie-zoek-opdrachten. Dit terwijl taal in legio zoekopdrachten een onbelangrijk aspect zou kunnen zijn of geen barrière hoeft te vormen. Het gebruik van URL's/domeinnamen is vaak moeilijk, doordat de URL's/domeinnamen vaak te lang en ingewikkeld zijn. Bovendien bevat de URL-notatie weinig functionele logica. Zoekmachines zijn qua technische mogelijkheden vaak wereldwijd georiënteerd, maar zijn in het gebruik door de manier van zoeken op site-inhoudelijke informatie, en de daardoor manifest wordende taalbarrière, vaak taalafhankelijk en weinig regio-georiënteerd. Bij veel huidige zoekmachines op het internet bestaat een onvoldoende gedefinieerde relatie tussen zoekopdracht en resultaat. De huidige zoekmachines voor algemene doeleinden, zoeken site-inhoudelijk aan de hand van door gebruiker opgegeven zoekbegrippen. Het zoeken verloopt veelal moeizaam en de zoekresultaten zijn in veel gevallen matig of slecht. Door de wijze van zoeken (op inhoudelijke details), het huidige informatieaanbod, en de te verwachten groei in de toekomst van internet(toepassingen) zullen resultaten van zoekopdrachten op basis van weinig specifieke zoekbegrippen in toenemende mate onbruikbare resultaten opleveren. Het gebruik van zoekmachines is in algemeenheid niet intuïtief. Het op een vertrouwde,

intuïtieve manier gericht verkleinen van het zoekgebied (dit kan voor bepaalde zoekopdrachten wezenlijk zijn) voorafgaand aan een gedetailleerde zoekopdracht is met de bestaande voor algemeen gebruik geschikte zoekmachines nauwelijks mogelijk. Op het moment zijn TLD's gedefinieerd op basis van een wereldwijde open organisatiestructuur met weinig restricties in URL's/domeinnamen en zij verschaffen daardoor weinig specifieke gebruiksmogelijkheden.

De publicatie van S. Zatti: "Naming in OSI: "Distinguished Names or Object Identifiers?", Proceedings of the Annual European Computer Conference (Compeuro), US, Los Alamitos, IEEE. Computer Society Press, deel conferentie 5, 1991, bladzijden 258-262" beschrijft twee identificatieschema's, te weten Distinguished Names (DN) en Object Identifiers (OI), welke op grote schaal worden gebruikt in een OSI omgeving. Het DN-schema is voldoende flexibel en krachtig om het globale wereldwijde aan de behoefte aan namen te voorzien. Het O.I.-schema heeft de mogelijkheid om speciale eisen in te bouwen, welke worden gesteld aan individuele wensen. Het probleem van deze schema's is dat deze in de huidige vorm niet in elkaar kunnen worden geïntegreerd, zodat een behoefte ontstaat naar een ontwerp van een systeem, welk systeem binnen de mogelijkheden van OSI en wereldwijde netwerken voorziet in een uniform naamschema om alle soorten objecten te identificeren. De publicatie draagt een uniforme oplossing aan, waarbij beide schema's naast elkaar in één omgeving kunnen bestaan, louter door een minimale aanpassing in genoemde schema's.

De onderhavige uitvinding heeft tot doel het verschaffen van een verbeterde inrichting voor registratie, adressering, structurering en het vinden van entiteiten en gegevens, vooral voor internettoepassingen, onder handhaving van de voordelen volgens de stand van techniek, zonder de beperkingen volgens de stand van techniek.

De onderhavige uitvinding verschaft daartoe werkwijze voor identificeren en registreren van entiteiten, in het bijzonder voor internet toepassingen, omvattende de kenmerken: a) het definiëren van een URL/Domeinnaam-stelsel conform een stelsel identificatiecodes, b) het formuleren van een URL/Domeinnaam-notatiereglement conform het gedefinieerde stelsel identificatiecodes, en c) het vastleggen van codes en de bijbehorende URL's/Domeinnamen op basis van het gedefinieerde stelsel identificatiecodes en volgens het geformuleerde URL/Domeinnaam-notatiereglement.

Bij voorkeur omvat de werkwijze tevens de bewerkingsstappen: d) het registreren van gegevens van entiteiten, e) het creëren van een gegevensdrager op basis van de geregistreerde gegevens, en f) het koppelen van de gegevensdrager aan een specifieke URL/domeinnaam. Door in een URL/domein, namen en/of woorden te vervangen door een bij een gebruiker/aanbieder behorende identificatiecode en deze te registreren volgens een bij de code passend notatiereglement ontstaat een betere vindbaarheid door een logische en of bekende relatie tussen aanbieder of het aangebodene en de geregistreerde URL/domeinnaam. Daarnaast geeft het de mogelijkheid om URL's en informatie op internet te vinden, althans wanneer de specifieke URL's/domeinnamen volgens voorkeursuitvoeringen publiek toegankelijk worden gemaakt en/of wanneer diensten worden verschaft middels een gegevensdrager, zoals bijvoorbeeld de specifieke URL's/domeinnamen of een pagina met hyperlinks, door gebruikmaking van andere niet internet gerelateerde (zoek)systemen en media die gebaseerd zijn op hetzelfde stelsel identificaties. Bij gebruikmaking van een bestaande identificatiecode kunnen potentiële geregistreerden doelgericht worden benaderd waarbij gebruik gemaakt kan worden van een eventueel reeds bestaand zoeksysteem. Hierdoor kan afhankelijk van de gebruikte identificatiecode de participatie onder algemene of specifieke groepen worden vergroot. Door gebruikmaking van identificatiecodes in een URL/domeinnaam ontstaat een begripvrije/waardevrije URL/domeinnaam zonder betekenis in zichzelf. Taalproblemen kunnen door het gebruik van identificatiecodes en bijbehorende structuur worden ondervangen, ook wanneer het gaat om de toegestane karakters bij URL-naamgeving voor een belangrijk deel worden ondervangen. De mondelinge overdracht kan door een specifiek en functioneel beperkend notatiereglement makkelijker en eenduidiger worden. Door het gebruik van identificatiecodes en notatiereglement wordt de structuur van het internet en daarmee de logica vergroot. Gebruikmaking van het notatie-reglement en de daaruit volgende structuur maakt het mogelijk om het zoekgebied (op URL-niveau) te verfijnen, ook zonder dat hiertoe gebruik moet worden gemaakt van een zoekmachine. Tevens kan bij groei van het internet (gebruikers/aanbieders) de functionaliteit vergroot worden en kan de overzichtelijkheid gewaarborgd blijven. Door de volgens de uitvinding gebruikte combinatie van TLD, identificatiecode, gekoppelde gegevensregistratie en publicatie, en zoek- en vindmogelijkheden van gegevens wordt de vindbaarheid, gelijkwaardigheid et cetera. vergroot en kan de participatie aan het internet sterk toenemen. De publicatie van Zatti beschrijft weliswaar een uniform stelsel identificatiecodes (naamschema), doch de

werkwijze volgens de onderhavige uitvinding wijkt hiervan ondermeer af doordat, hierin geen unitaire wijze van identificatie wordt beschreven maar een koppeling van meerder identificatie-systemen. Vooral op het niveau van een gebruiker biedt dit geen soelaas. De publicatie van Zatti creëert door identificatie puur een onderscheid tussen objecten of namen, terwijl de onderhavige vinding naast het creëren van onderscheid tevens de functionaliteit en de overzichtelijkheid van het internet vergroot ten opzichte van het huidige internet. Ook wordt in de publicatie van Zatti geen relatie gelegd met internettoepassingen.

De Duitse publicatie van T. Weihrich:"Filofax fürs Internet", CT Magazin für Computer Technik, DE, Verlag Heinz Heise GMBH., Hannover, nummer 10, 1 oktober1997 (1997-10-01), bladzijde 346-348, 350-355, XP000701086, ISSN: 0724-8679 beschrijft de noodzakelijkheid van de aanwezigheid van een 'Domein Naam Sever'(DNS) om de bij een URL/domeinnaam horend Internet Protocol (IP)-adres op te zoeken. Daar de IP-adressen uit een twaalfcijferige combinatie bestaat en een structuur en logica ontbreken is een DNS noodzakelijk. De URL's/domeinnamen zijn louter ter verbetering van de gebruiksvriendelijkheid van het internet en dienen louter als hulpmiddel. De eigenlijke communicatie verloopt via de IP-adressen. De DNS heeft als taak de link te leggen van URL/domeinnaam naar bijbehorend IP-adres en omgekeerd. Door de beperktheid van de beschikbare internetdomeinen en de toenemende mate van het grootschalig opkopen van domeinnamen hebben verschillende internetorganisaties en internetproviders gediscussieerd over een uitbreiding van de beschikbare TLD's en bijbehorende organisatie. Tot heden ten dage verhindert de Amerikaanse regering een dergelijke uitbreiding. Deze publicatie propageert voor een logica in de IP-adressen, verwijzend naar de URL's/domeinnamen, zodat uiteindelijk een DNS overbodig zal worden en pleit tevens voor een uitbreiding van het aantal beschikbare internetadressen. Zelfs in combinatie met de eerder besproken publicatie van Zatti verschaft de publicatie van Weihrich niet de werkwijze volgens de uitvinding waarmee door wezenlijk andere invulling van URL's/domeinnamen een verregaande vereenvoudigde communicatie op het internet mogelijk wordt gemaakt. Een bijkomstig verschil van de publicatie van Weihrich met de onderhavige vinding is dat de werkwijze zoals genoemd in de publicatie puur technisch gericht is, waar de gebruiker niet direct mee te maken krijgt, terwijl in de onderhavige uitvinding de werkwijze juist specifiek voor de gebruiker is ontworpen.

De werkwijze omvat bij voorkeur tevens de bewerkingsstappen: i) het opnemen van geregistreerde gegevens van entiteiten in gegevensbestanden, j) het opnemen van de gegevensbestanden in een zoeksysteem, en k) het verschaffen van een interface met zoekmogelijkheden voor het in opdracht genereren van resultaten zoals bijvoorbeeld URL's/Domeinnamen als reactie op een zoekopdracht. Daarbij kan de werkwijze worden toegepast binnen specifiek hiertoe ontworpen Top Level Domeinen en/of Sub Level Domeinen. Een zoekmachine welke werkt middels de werkwijze volgens de uitvinding zoekt op basis van registergegevens. Deze gegevens worden geregistreerd in combinatie met en gekoppeld aan een URL/domein. Door registratie van relevante (zoek)begrippen in het register kan eenvoudig en effectief gezocht worden en ontstaat een duidelijker relatie tussen zoekopdracht en het te verwachten resultaat. Door gebruikmaking van registergegevens worden zoektermen gedefinieerd, het zoeken vereenvoudigd en het resultaat overzichtelijker en beter te voorspellen. Tevens ontstaat een gedefinieerde relatie tussen zoekopdracht en te verwachten resultaat. Bij voorkeur kan via de zoekmachine direct door het ingeven van zoekbegrippen zoals bijvoorbeeld land, regio of branche het zoekgebied worden beperkt tot een groep van abonnees. Door gebruikmaking van een TLD met functiegericht notatiereglement op basis van identificatiecodes kan een sterk verband worden gecreëerd tussen TLD, URL/domein en de uiteindelijke gebruiksfunctie. Weliswaar wordt daardoor de naamgeving binnen de TLD restrictief edoch hierdoor zal de functionaliteit worden verbeterd en zullen de gebruiksmogelijkheden effectiever en gerichter zijn.

De uitvinding verschaft tevens een samenstel van hardware en software voor het toepassen van de genoemde werkwijze, omvattende een netwerk van servers voor het vastleggen en beschikbaar maken van de URL's/domeinnamen, ten minste één met het netwerk van servers gekoppelde database met geregistreerde gegevens van entiteiten van URL's/domeinnamen, en hardware en software voor het aanmelden, lokaliseren en presenteren van de geregistreerde gegevens. De eigenschappen van de servers kunnen multifunctioneel zijn, hetgeen wil zeggen dat een server zowel een URL/domeinnaam beschikbaar kan maken als vast kan leggen. Het kan ook zijn dat iedere server zijn eigen taak heeft toegewezen gekregen, zodat bijvoorbeeld de ene server is ingericht om een URL/domeinnaam beschikbaar te maken, de andere server om deze URL/domeinnaam vast te leggen. Eventueel kunnen op vastgestelde tijdstippen updates worden gemaakt op een secundaire server van de in bedrijf zijnde primaire servers, zodat bij het uitvallen

van een primaire server contact kan worden gemaakt met een secundaire server, waardoor de beschikbare URL's/domeinnamen, zelfs na uitval van een primaire server, altijd op te roepen zijn.

De uitvinding zal worden verduidelijkt aan de hand van de in navolgende figuren weergegeven niet-limitatieve uitvoeringsvoorbeelden. Hierin toont:
figuur 1 een schematische weergave van een stelsel van identificatiecodes gebaseerd op telefoonnummers en het daarbij behorende (mobiele) nummernetwerk,
figuur 2 een schematische weergave van een tweede stelsel van identificatiecodes dat enige gelijkenis toont met het stelsel volgens figuur 1,
figuur 3, een schematische weergave van een derde stelsel van nieuw ontworpen identificatiecodes dat enige gelijkenis toont met de stelsels volgens de figuren 1 en 2,
figuur 4, een schematische weergave van een vierde stelsel van identificatiecodes dat enige gelijkenis toont met de stelsels volgens de figuren 1, 2 en 3,
figuur 5, een schematische weergave van een werkwijze volgens de uitvinding voor het opzoeken van een URL,
figuur 6 een schematische weergave van een netwerk voor het opzoeken van een URL/domeinnaam volgens de uitvinding, en
figuur 7 een schematische weergave van de opeenvolgende bewerkingsstappen volgens de onderhavige uitvinding voor het aanvragen van een nieuwe URL/domeinnaam.

Figuur 1 toont een voorbeeld van een stelsel 1 van identificatiecodes gebaseerd op telefoonnummers en een daarbij behorend (mobiele) netwerk. Dit stelsel 1 van identificaties is gebaseerd op een reeds bestaand stelsel van identificaties, namelijk het bestaande stelsel van unieke abonnee- en netnummers voor telefoonverkeer. Het stelsel 1 van identificatiecodes omvat internetadressen (URL's/domeinnamen) 2, welke zijn opgebouwd uit een host 3, een sub-leveldomein 4 en een top-leveldomein 5. De URL's/domeinnamen kunnen in detail ook op andere manieren worden opgebouwd, bijvoorbeeld door in plaats van punten streepjes of andere tekens te gebruiken. Per land kan een landelijk internetadres 6 worden opgesteld, waarin het sub-leveldomein 4 is gekoppeld aan het telefoonnetnummer van het betreffende land. Het top-leveldomein 5 kan bestaan uit een registerextensie 7. De registerextensie 7 wordt uit een beperkte groep beschikbare registerextensies (uni) gekozen, zodanig dat ieder land bij voorkeur dezelfde registerextensie heeft. Een regionaal internetadres 8 heeft bij voorkeur de

registerextensie 7 van het bij de regio behorende land. Als sub-leveldomein 4 wordt bij voorkeur het netnummer van de betreffende regio gekozen. Een abonneeadres 9 heeft, net als het regionaal internetadres 8, bij voorkeur de registerextensie 7 van het betreffende land. Het sub-leveldomein 4 omvat het (tien-cijferig Nederlands) telefoonnummer van de abonnee. Op elke landelijke of regionale site kan worden gezocht in een niet-weergegeven register van abonneegegevens met behulp van diverse sleutelwoorden. Tevens kunnen verwijzingen worden gemaakt naar zoekmachines, geografische kaarten, vertaaldiensten, servicenummers et cetera.

Figuur 2 toont een tweede voorbeeld van een stelsel 10 van identificaties, gebaseerd op telefoonnummers en bijbehorende (mobiel) nummernetwerk. Gekozen is om een uniforme host 3, sub-leveldomein 4 en top-leveldomein 5 te kiezen en achter top-leveldomein 5 een scheidingsteken 11, in dit voorbeeld een "/"-teken, te plaatsen, waar achter het te raadplegen landnetnummer, regionetnummer of telefoonnummer van de abonnee is geplaatst.

Figuur 3 toont een derde voorbeeld van een stelsel 12 van identificatiecodes, gebaseerd op codes en bijbehorende netwerk. Stelsel 12 van identificatiecodes is gebaseerd op een nieuw nog nader te bepalen op codestelsel. Het top-leveldomein 5 is bij voorkeur van tevoren vastgesteld. Het sub-leveldomein 4 omvat een landcode, landcode met regiocode, of landcode met regiocode in combinatie met abonneecode.

Figuur 4 toont een vierde voorbeeld van een stelsel 13 van identificatiecodes, gebaseerd op codes en bijbehorende netwerk. Conform figuur 3 is het stelsel 13 van identificaties gebaseerd op nog nader te bepalen codes. Gekozen is om een uniforme host 3, sub-leveldomein 4 en top-leveldomein 5 te kiezen en achter top-leveldomein 5 een scheidingsteken 11, in dit voorbeeld een "/"-teken, te plaatsen, waar achter de te raadplegen landcode, regiocode of telefooncode van de abonnee is geplaatst.

Figuur 5 toont een schema 14 voor het opzoeken van een URL 2. Gebruiker 15 heeft de mogelijkheid om middels telefoonboeken, informatiediensten en dergelijke landelijke 6, regionale 8 of sites van abonnees 9 op te zoeken. Indien de URL 2 van bijvoorbeeld een abonnee bekend is, dan kan deze direct worden geraadpleegd. Indien deze betreffende URL 2 niet bekend is, dan kan op een niveau hoger (landelijk of regionaal) met behulp

van zoekmachines of andere koppelingen (hyperlinks) naar een gewenste site worden gezocht.

Figuur 6 toont een netwerk 16 voor het opzoeken van een URL 2. A symboliseert de browser van een gebruiker welke is gekoppeld aan een netwerk 16 van servers 17. Browser A legt via één of meerdere servers verbinding met een zoekpagina B. Een door een niet weergegeven gebruiker ingegeven zoekopdracht op zoekpagina B wordt middels één of meerdere servers doorgestuurd naar een database 18. Database 18 heeft de capaciteit om de in zoekpagina B ingegeven zoekopdrachten te koppelen aan zoekresultaten met bijbehorende URL's 2. De zoekresultaten worden over het netwerk 16 van servers 17 gestuurd om vervolgens weer door browser A ontvangen en gepubliceerd te kunnen worden.

Figuur 7 toont een opeenvolging 19 van bewerkingsstappen voor het aanvrage van een nieuwe URL of abonnee-identificatie 27. Stap 20 beschrijft de aanmelding van een nieuwe Nederlandse abonnee 27 of entiteit met als lokaal telefoonnummer (28) 0413-342829. Aan de nieuwe abonnee wordt in stap 21 een specifieke identificatiecode 29 gekoppeld, welke in dit voorbeeld het volledige internationale telefoonnummer van de abonnee is, 0031-0413-342829. In stap 22 wordt identificatiecode 29 gekoppeld aan een unieke URL 30, www.0031-0413-342829.uni. Vervolgens worden in stap 23 de gegevens 31 van de abonnee 27, zoals naam, adres, branche, specialiteit et cetera, geregistreerd. In stap 24 worden de geregistreerde gegevens 31 van abonnee 27 publiek toegankelijk gemaakt via URL 30 in de vorm van een webpagina op internet. Deze webpagina wordt een gegevensdrager 32 genoemd. Een derde kan de geregistreerde gegevens 31 met behulp van een niet weergegeven browser oproepen (stap 25) door gebruik te maken van een zoekmachine of direct via de URL 30. In stap 26 worden de op basis van de in stap 25 gegeven opdrachten gevonden resultaten gepresenteerd . De gegevensdrager 32 met geregistreerde gegevens 32 zijn nu voor de derde toegankelijk. Optioneel kunnen sites om privacy redenen, gevoelige informatie of andere redenen worden afgeschermd van het publiek domein dan wel beveiligd door een paswoord.

Conclusies:

1. Werkwijze voor identificeren en registreren van entiteiten, in het bijzonder voor internet toepassingen, omvattende de bewerkingsstappen:

a) het definiëren van een URL/Domeinnaam-stelsel conform een stelsel identificatiecodes,

b) het formuleren van een URL/Domeinnaam-notatiereglement conform het gedefinieerde stelsel identificatiecodes, en

c) het vastleggen van codes en de bijbehorende URL's/Domeinnamen op basis van het gedefinieerde stelsel identificatiecodes en volgens het geformuleerde URL/Domeinnaam-notatiereglement.

2. Werkwijze volgens bovenstaande conclusie, met het kenmerk, dat de werkwijze tevens omvat de bewerkingsstappen:

d) het registreren van gegevens van entiteiten,

e) het creëren van een gegevensdrager op basis van de geregistreerde gegevens, en

f) het koppelen van de gegevensdrager aan een specifieke URL/domeinnaam.

3.Werkwijze volgens conclusie 2, met het kenmerk, dat de werkwijze tevens omvat de bewerkingsstap:

g) het publiek toegankelijk maken van specifieke URL's/domeinnamen.

4. Werkwijze volgens conclusies 2 of 3, met het kenmerk, dat de werkwijze tevens omvat de bewerkingsstap:

h) het verschaffen van diensten middels een gegevensdrager.

5. Werkwijze volgens één der conclusies 2-4, met het kenmerk, dat de werkwijze tevens omvat de bewerkingsstappen:

i) het opnemen van geregistreerde gegevens van entiteiten in gegevensbestanden,

j) het opnemen van de gegevensbestanden in een zoeksysteem, en

k) het verschaffen van een interface met zoekmogelijkheden voor het in opdracht genereren van resultaten als reactie op een zoekopdracht.

6. Werkwijze volgens één of meer van de bovenstaande conclusies, met het kenmerk, dat de werkwijze wordt toegepast binnen specifieke Top Level Domeinen en/of Sub Level Domeinen.

7. Samenstel van hardware en software voor het toepassen van de werkwijze volgens één der voorgaande conclusies, omvattende:

- een netwerk van servers voor het vastleggen en beschikbaar maken van de URL's/domeinnamen,
- ten minste één met het netwerk van servers gekoppelde database met geregistreerde gegevens van entiteiten van URL's/domeinnamen, en
- hardware en software voor het aanmelden, lokaliseren en presenteren van de geregistreerde gegevens.

Uittreksel

De uitvinding heeft betrekking op een werkwijze voor identificeren en registreren van entiteiten, in het bijzonder voor internet toepassingen, omvattende de bewerkingsstappen:

a) het definiëren van een URL/Domeinnaam-stelsel conform een stelsel identificatiecodes,

b) het formuleren van een URL/Domeinnaam-notatiereglement conform het gedefinieerde stelsel identificatiecodes, en

c) het vastleggen van codes en de bijbehorende URL's/Domeinnamen op basis van het gedefinieerde stelsel identificatiecodes en volgens het geformuleerde URL/Domeinnaam-notatiereglement.

De uitvinding heeft tevens betrekking op een samenstel van hardware en software voor het toepassen van deze werkwijze.